

SERMC Safety SOP 25

From: SERMC Safety (C106)

Subj: Control of Polychlorinated Biphenyls (PCBs)

Ref: (a) OSHA 29 CFR 1910.1000, Subpart Z, Toxic and Hazardous Substances  
(b) OPNAV M-5090.1, Environmental Readiness Program Manual, CHAPTER 25, Toxic Substances Control Act  
(c) SERMC Safety SOP 41, Hazard Communication Program  
(d) SERMC Safety SOP 7, Hazardous Material Control and Management Program (HMC&M)  
(e) SERMC Safety SOP 42, Regulated Waste Program  
(f) SERMC SOP 15, Respiratory Protection Program

Encl: There are no enclosures associated with this SOP.

1. Purpose. To provide policies, information, guidance, and minimum mandatory requirements necessary to prevent and minimize Southeast Regional Maintenance Center (SERMC) personnel exposure to Polychlorinated Biphenyls (PCB's).

2. Cancellation. This revision supersedes the revision dated 14 May 2019.

3. Applicability. This SOP applies to all SERMC personnel performing work where there is expected exposure to, or there is potential exposure to, PCBs. These work operations include, but are not limited filling, removing, or working with PCB Articles, see the definition section.

NOTE: Currently, no identified SERMC work processes involve filling, removing, or working with PCB Articles. Prior to performing work, system drawings and material specific Safety Data Sheets (SDSs) must be reviewed to determine if PCB Articles may be present.

4. Responsibilities.

a. SERMC Safety Department will:

(1) Administer this program in accordance with reference (a).

(2) Develop and provide PCB awareness training for SERMC personnel, as identified in section 10 of this SOP.

(3) Assist in the development and/or maintenance of current work related SOPs and Job Hazard Analyses (JHAs).

(4) Conduct employee exposure assessments during activities involving the disturbance of PCBs or PCB-containing materials as required. Contact Naval Medicine Readiness and Training Unit (NMR&TU), Mayport - Industrial Hygienist (IH), as necessary, to evaluate and monitor potential PCB exposures.

(5) Review the command's Annual IH survey to ensure that any shops performing SERMC work processes with the potential to involve PCBs are identified.

b. Supervisors will:

(1) Ensure personnel comply with the requirements of this SOP.

(2) Prohibit personnel from performing work where potential exposure to PCBs exist until provided appropriate training and guidance as determined by the Safety Office.

(3) Ensure that employees wear PPE specified in applicable Material Safety Data Sheets (MSDS)/SDSs, the command's IH Survey, Job Hazard Analysis (JHAs), Technical Documents, and/or this SOP.

(4) Ensure that employees use applicable controls to prevent exposure to PCBs.

(5) Ensure that PCB containing waste is disposed of in accordance with references (d) and (e).

c. Code 962 Planning will;

(1) Review technical documents, drawings, work specifications, Maintenance Requirement Cards (MRCs), etc. and identify systems or components that contain, or could contain, PCBs.

**NOTE:** The SERMC Safety Office must be notified immediately if any system drawing or MRC identifies the presence, or potential presence, of PCBs.

(2) Notify the Supervisors of potentially affected shops and codes whenever systems or components to be disturbed contain, or could contain, PCBs.

(3) Ensure applicable requirements of this SOP are inserted into technical work documents (TWDs), FWP, or CWP directing work.

(4) Verify the technical suitability of materials to be used as a substitute for PCB materials.

d. Personnel in affected Shops/Codes will:

(1) Comply with the requirements contained in the references of this SOP.

(2) Comply with the requirements identified in work packages controlling PCB related work including Maintenance Requirement Cards (MRCs).

## 5. Definitions.

Code of Federal Regulations (CFR): The codification of general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments and agencies of the federal government of the United States.

PCB: Any chemical substance, limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances that contain such substance. Prior to stringent regulation of PCBs, PCBs were used in a variety of applications as a fire retardant, in paints, and for other purposes such as sound insulating felt in submarines and electrical cables. Often, PCBs were added in these applications without being specified in material or equipment procurement specifications; thus, the presence of PCBs cannot always be determined through review of applicable procurement documents. In the disposal of materials and components, care should be taken to identify all potentially hazardous substances and carry out the disposal accordingly.

PCB Article: Any manufactured article, other than a PCB container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. This includes capacitors, transformers, electric motors, pumps, pipes, and any other manufactured items.

PCB Article Container: Any package, can, bottle, bag, barrel, drum, tank, or other device used to contain PCB articles, or PCB equipment and whose surface(s) have not been in direct contact with PCB's.

PCB Control: Principles used for controlling hazards in the occupational environment include: substitution with less hazardous materials, engineering controls (closed systems, thermostats), administrative controls (job rotation, work time limits), and use of personal protective equipment (PPE), in that order.

Permissible Exposure Level (PEL): An Occupational Safety and Health Administration (OSHA) derived level which is safe for the average person to be exposed to for 8 hours/day, 5 days/week without any deleterious effects. PCB PELs relate to allowable airborne exposure concentrations for an 8-hour day in a 40-hour workweek. There are two PELs for PCBs depending on the approximate percentage by weight of chlorine in the compound:

- a. Chlorodiphenyl (42 percent chlorine)- 1.0 mg/m<sup>3</sup>
- b. Chlorodiphenyl (54 percent chlorine)- 0.5 mg/m<sup>3</sup>

6. Policy. SERMC policy is to minimize the potential for PCB exposure. When processes are identified that will involve PCBs, personnel will use general work practice controls and process specific personal protective equipment (PPE) to prevent and minimize exposure. Additionally, consistent with NAVSUP Publication 718, Navy Guidance Manual for the Hazardous Material Substitution, when PCB containing materials are identified SERMC will substitute those materials with non-PCB containing materials.

7. General Workplace PCB Controls. Personnel performing processes involving the handling of PCB containing materials, or materials suspected of containing PCBs will utilize the following practices:

- a. When working with PCB-impregnated materials, such as insulating felts or articles that contain liquid PCB solutions, containments or laydown areas will be used to prevent surface contamination.
- b. Processes that generate airborne concentrations of materials, including burning, heating, grinding and sanding of PCB containing materials, will be strictly prohibited. Hand

scrapers will be used in lieu of power tools to remove gasket material; liquids will be pumped in lieu of pouring, etc.

c. Eating, drinking, smoking, using chewing tobacco, chewing gun, or applying of cosmetics will be strictly prohibited within PCB work areas. Personnel performing processes involving the handling of PCB containing materials, or materials suspected of containing PCB's, regardless of concentrations of exposure or lack of skin exposure must wash their hands and face prior to eating, drinking, smoking, chewing, or applying cosmetics (including sunscreen).

d. PCB-containing waste, scrap, debris and contaminated PPE will be collected and disposed of in accordance with reference (e).

#### 8. Personal Protective Equipment.

a. Personnel engaged in handling PCB-contaminated or PCB-impregnated material (such as "rip out" or "stripping" operations), during which skin contact with PCBs is considered probable, will wear the following PPE:

(1) Full-body, one piece disposable coveralls constructed of Tyvek material or comparable substitute material.

(2) Nitrile or Viton gloves.

(3) Nitrile or neoprene foot coverings if the work involves the probability of foot contamination by any means.

(4) Face shields and vented goggles or other appropriate eye protection wherever the possibility of eye contact exists.

(5) Respiratory Protection. Respiratory protection is required when airborne exposures can exceed PELs. SERMC respirator requirements are specified in reference (f). Prior to any work which can generate airborne PCB contaminants (i.e. dusts, mists, fibers, vapors or gases) notify the command's Respiratory Protection Program Manager.

9. Training. Personnel responsible for identifying and developing work packages, including Code 962 Planners and Supervisors, will be trained to determine potential sources of PCB exposure identified in the Applicability Section of this SOP.

a. Training, if needed, will be provided by the SERMC Safety Department and documented in Enterprise Safety Application Management System (ESAMS) as On-the-Job-Training (OJT) titled "SERMC PCB Information Awareness Training,".

b. Personnel performing work involving contact with PCB containing materials will have process specific training and will be made aware of hazards at the particular job's briefing.

c. When provided, training will include the "Polychlorinated Biphenyls - ToxFAQs™" ([www.astdr.cdc.gov/toxfaq/tfacts17.pdf](http://www.astdr.cdc.gov/toxfaq/tfacts17.pdf)).

10. Forms. There are no forms associated with this SOP.

/s/  
Aaron E. Moore, C106